

What we claim is

1. Method for correcting at least one colour of a photographic image including at least one pattern area or image pattern with a predictably known colour (memory colour), said image being transferred to a digital representation, the method comprising the following steps:
  - a) said at least one pattern area or image pattern is being detected with respect to its presence and its location, and preferably also with respect to its dimensions;
  - b) an existing colour in the at least one detected pattern area or image pattern being determined;
  - c) providing at least one replacement colour value (memory colour) being related to the respective at least one pattern area or image pattern;
  - d) replacing said determined existing colour by said at least one replacement colour value, to correct the colour in the image pattern or image area.
2. Method according to claim 1, wherein a deviation between the at least one replacement colour value (memory colour) and said existing colour being determined, and modifying existing colour values in the detected pattern area or image pattern on the basis of the deviation.
3. Method according to claim 2, wherein in particular all existing colours of the image are modified on the basis of the deviation.
4. Method according to claim 1, wherein an average colour value and/or mean colour value of the colour values in the at least one detected image pattern or pattern area is determined to be used as the existing colour.

5. Method according to claim 1, wherein the replacement colour value (memory colour) is determined on the basis of at least one distribution of colour values (memory colour) being related to the respective at least one pattern area or image pattern, wherein a matching replacement colour value is assigned to the determined existing colour (s).
6. Method according to claim 1, wherein a transform is being provided for transforming existing colour values on the basis of the matching replacement colour value.
7. Method according to claim 1, wherein the colour correction is repeatedly conducted, using the modified existing colour values as the existing colour values.
8. Method according to claim 1, wherein a basic pattern of a recordable object is stored to be detected in the digital representation of the photographic image to detect the location of the pattern area or image pattern.
9. Method according to claim 1, wherein the pattern area represents a human face and wherein accordingly also the basic pattern represents a human face for instance in the shape of a pictogram.
10. Method according to claim 5, wherein a colour distribution is used derived from one of said pattern area with the predictably known colour and/or predictably known colour distribution (both memory colour representations).
11. Method according to claim , wherein several distributions are provided and one distribution is selected which is deemed to match with the determined predictably known colour (memory colour).
12. Method according to claim 5, wherein additional recording information is provided, providing data about light conditions, distance conditions, or the like, to provide supplemental colour correction data.
13. Method according to claim 6, comprising the steps of:

a) providing at least one set of distributions of colour values (memory colours) in the colour space,

b) assigning one of said set of distributions to each of the at least one pattern areas;

c) determine the transformation of transforming the at least one colour value of the at least one pattern area or image pattern such that the transformed colour value matches to the assigned distribution or distributions.

14. Method according to claim 6, wherein said method being iteratively conducted on the basis of a respectively last colour corrected digital representation of a photographic image.

15. Method according to claim 6, wherein the matching is performed in accordance with an optimisation process which evaluated a total matching degree between the transformed colour values and the colour values of the assigned distribution for each pattern area and which determines the transformation such that a function is optimised, said function mathematically combine single matching degrees for each pattern area and its assigned distribution.

16. Method according to claim 6, wherein said distribution(s) define a probability of colour values to represent a replacement colour and wherein said matching degree is determined based on said probability.

17. Method according to claim 6, wherein the transform is determined to include a colour appearance transform, said colour appearance transform modelling the appearance of the colour values of the image data additionally by a human being, who perceives the corrected image data.

18. Image processing device for processing image data, including

- a) an image data input section,
- b) an image data processing section,
- c) an image data recording section for recording image data, wherein the image data processing section is embodied to implement a method according to claim 1.